



underlined = deleted in targeting construct

[ ] = sequence flanking Neo insert in targeting construct

AGGGAGAGTCTGCCCAAGTTTTTGTATATTTTCTCACTGAGGCATCTATTCAAGTTTGG  
GCAGCAGACACTGAGCAGAACGTAGCACGGCAATGCTTGGTAGCAATGCCTGTCCGGCCA  
GCACTCAGAAGACGGAGGCAGGAGAATCATAGCTTCCAGTCAGCCTCTTCTACAATATAG  
TCAGTTGGAAGTCAGCCAGCTTAGACAACATGGAGAGCCTGT [ GCCGAAAGCCACTGGGTA  
AGCCCGAATCTCAGTAGCAGAGAGCTGCCCAGGGTGCGTACTGC : AAAAAAAAAACCTCA  
AACACAGAAGTAGGGAGGTGTAAAATAAAGTGTAGGGGGGTGGAATTTAAGCTGATGTG  
GACTTCCAAATAAAGTTACCTTTTAGATACCTATTTAAATCAATAGCATAGACCTGAAAC  
TGCTATCAGAAAATGTGTCTATTCTGAGGAAGGAGTGCTAACGAGGTTCTGTGAGGGGG  
GCCTCTGGCTTTGAGAGGGTGTACCATCACATAAGACTCCTAAAAGCACATACTTTTATA  
AATTCACCATGAGCTTTAACATCTTCTTTGTCAATTCGCAGACTGAGCCATGGAGTCTTT  
CGATGCTGACACCAATTCAACTGACCTACACTCAGGCCTCTGTTTCAACCCCAAGACAT  
TG] CCTCCATGGTCATTCTTGGTCTCACTTGTCTATTGGGACTGCTAGGCAATGGGCTGGT  
CTGTGGGTAGCTGGCGTAAAGATGAAGACGACCGTGAACACAGTCTGGTTCCCTCCATCT  
CACCCTGGCCGATTTCCCTCTGCTGCCTCTCCTTGCCCTTCTCCTTGGCTCACCTGATTCT  
CCAAGGACACTGGCCCTAT [ GGCTTGTTCCTGTGCAAACTTATCCCATCCATCATTATTC  
CAACATGTTTTGCCAGTGTCTTCCTGCTTACTGCCATTAGCCTGGACCGATGTCTGATAGT  
ACATAAGCCAATCTGGTGCCAGAATCATCGAAACGTGAGAACCGCCTTCGCCATCTGTGG  
ATGTGTCTGGGTGGTAGCCTTTGTGATGTGTGTGCCGTATTTGTATACCGTGATCTGTT  
CATTATGGACAATCGCAGTATATGTAGATATAATTTTGATTCTCCAGGTCATATGATTA  
TTGGGACTACGTGT] ACAACTAAGTCTACCAGAAAGCAATTCTACTGATAACTCCACTGC  
TCAGCTAACTGGACATATGAATGACAGGTCAGCTCCTTCCCTCTGTACAGGCAAGGGATTA  
CTTTTGGACAGTTACCACTGCCCTCCAGTCACAGCCATTCCTAACATCTCCTGAAGACTC  
ATTCTCTCTAGATTACAGCAAACCAACCCCATATGGTGGAAGCCTCCCTAATGTCCCT  
CACAGCCGCGGTACCCAGCGGGTTTCCCTGTTGAAGATCGTAAATCCAATACACTGAACGC  
TGACGCTTTTTCTCTCTGCTCACACAGAACTTTTCCCTACTGCTTCTAGTGGTCATTTATA  
CCCCATGATTTCCAGGGGATTTATGTTGACCAATTCACGTATGACAATCATGTGCCGAC  
ACCGCTGATGGCAATAACCATCACAAAGGCTGGTGGTGGGCTTCCTGGTGCCGTTTTTCAT  
CATGGTAATTTGTTACAGCCTCATCGTCTTCAGAAATGCGAAAAACCAACTTCACCAAGTC  
TCGGAACAAAACCTTTCCGGGTGGCTGTGGCTGTGGTCACTGTCTTTTTTATCTGTGGAC  
TCCATACCATCTTGTCCGAGTCCCTGCTATTGATTACTGATCCAGAAAGTTCCCTGGGGGA  
AGCTGTGATGTCTCGGAGTCCCTGCTATTGATTACTGATCCAGAAAGTTCCCTGGGGGA  
CCCTTTCCCTGTATGCCCTCTTGGGGAAAGACTTTAGGAAGAAAGCAAGACAGTCTATAAA  
GGGCATTCTGGAAGCAGCCTTCAGCGAAGAGCTCACGCACTCTACCAACTGTACCCAAGA  
CAAAGCCTCTTCAAAAAGAAACAATATGAGTACAGATGTGTGAAGATGTGGCCCTGGGAA  
CCTAAGCAGAGTTCTCAGGTGAACAGTGATGGATGACATGTGAGCAGGACACTTTAGACA  
ATTTGGCGACTCTCAGAGAAAGGTCTCTTATTGACATCAGCATCATTTGAAAACATTAAA  
GATGCAAAATTTCAAGCCCCATCCAGATGTGTTGACTCAGAATCTCTGGCCCATGGGAC  
CAGTGTTTTAACAGGCCTTCTTGTTCATCAGTGTAAAGTTTACCTCATTGGCTTAG  
TCTATTTCCATCCCTGACTACACCATGTGCAATGAATAACTTTTTCATCTGTTTTAGTA  
TTCTTTTTTTTTCTTAGCATCATCTAACTTCTAGTTTGCATGGAAGGCTGCTCTTATT  
GTTCTGAATGGAAGATATTCATTTATTGTACAGTTTTGTGGTGGTGACAAGTGATTTTA  
AGTGGGGAAAGAGACACAGTAAGAAAAGATCTATGAAAGCAGGGAGTGTGAGTTAGAGT  
TTGACAGAACACAGTGCCAAATGCCACCCACTAAAAGCAACCTGAGATAATTCCAGTGTT  
CATGTGAGCAAGTGAGCACAGATACACATAAACACTTTCCTACTCCTGGAGTGTTTTAGA  
AGTTGTAGCTTGGAGCTC

FIG. 2A

Gene Sequence  
Structure \*

663 bp

Sequence Deleted

859 bp

Size of full-length  
cDNA: 2658 bp

Targeting Vector\* (genomic sequence)

Construct Number: 3036

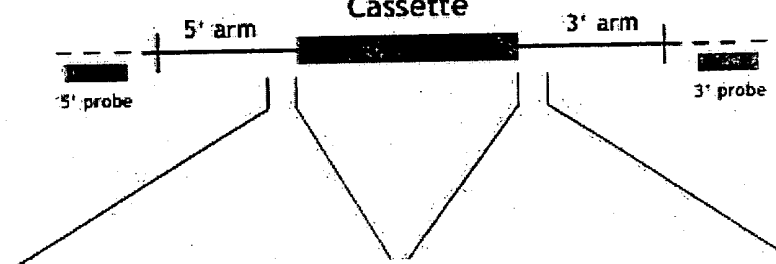
Arm Length:

5': 3.2 kb

3': 1.8 kb

LacZ-Neo

Cassette



Targeting Vector

Endogenous Locus

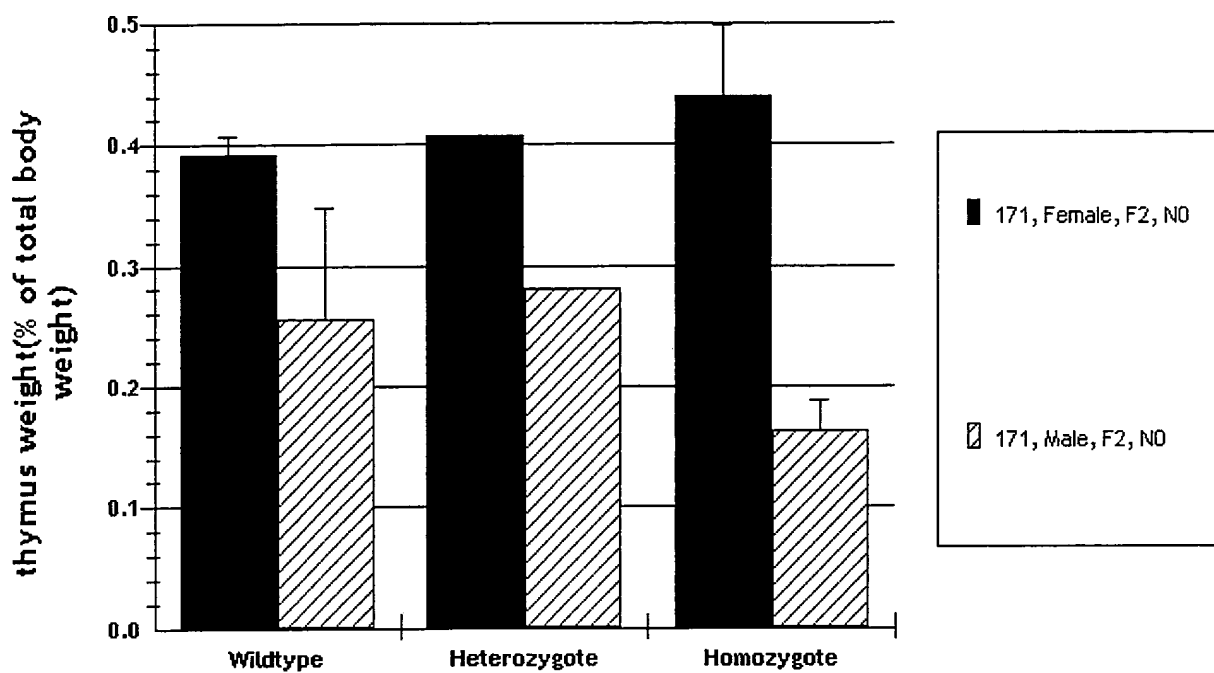
Not drawn to scale

5' >CGAGGTTCTGTGAGGGGGGCC  
TCTGGCTTTGAGAGGGTGTACCAT  
CACATAAGACTCCTAAAAGCACAT  
ACTTTTATAAATTCACCATGAGCT  
TTAACATCTTCTTGTCAATTCGC  
AGACTGAGCCATGGAGTCTTTCGA  
TGCTGACACCAATTCAACTGACCT  
ACACTCACGGCCTCTGTTTCAACC  
CCAAGACATTG<3' (SEQ ID  
NO: 3)

5' >GGCTTGTTCCCTGTGCAAACTT  
ATCCCATCCATCATTATTCTCAAC  
ATGTTTGCCAGTGTCTTCCTGCTT  
ACTGCCATTAGCCTGGACCGATGT  
CTGATAGTACATAAGCCAATCTGG  
TGCCAGAATCATCGAAACGTGAGA  
ACCGCCTTCGCCATCTGTGGATGT  
GTCTGGGTGGTAGCCTTTGTGATG  
TGTGTGCCCGT<3' (SEQ ID  
NO: 4)

FIG. 2B

## necropsy - thymus weight/body weight



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Fig. 3